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Journal of the Amateur Photographic Society of Madras.

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EDITORIAL NOTES.

PROFESSOR W. K. BURTON, writing in the *British Journal of Photography*, gives an interesting account of his experiences on the much-vexed subject of the combined toning and fixing bath. He has for long used the following bath:—

Hypo	2 ounces.
Borax	80 grains.
Chloride of gold	2 „
Water up to	8 ounces.

To this add 30 or 40 grains of powdered chalk. The chalk does not dissolve unless the bath tends to get acid, but remains as an inert powder at the bottom of the dish. The bath should be used as near the temperature of 65° F. as possible. The time of toning should be about 10 minutes. The paper has to be printed a little deeper than for ordinary baths and the quantity given above is sufficient for a sheet of paper 22 inches x 17 inches. The prints are taken unwashed, as they come from the printing frame, and placed face downwards in the toning bath.

PROF. BURTON says that he believes this bath gives more permanent results than any other single bath which he has ever used or than any separate baths. Of many hundreds of prints he has toned with it, some as much as twelve years ago, none, so far as he knows, have gone yellow. The general principles on which the merits of this particular bath depends are given as follows:—

1.—A very strong solution of Hypo: so as to make sure that the prints are thoroughly fixed before the toning is finished.

2—A comparatively strong solution of gold, otherwise the toning is intolerably slow.

3.—The neutrality or slight alkalinity of the bath, to be maintained even if an acid paper is employed.

4.—The same solution never to be used twice. The tone generally obtained is a very

deep brown but with some kinds of paper a purple can be produced.

We have tried this bath with satisfactory results. Though the tones obtained are very different from those in general use, they seem to us a pleasant change and distinctly suitable for many subjects.

DR. W. G. RUSSELL, to whose experiments on what we have called "pseudo-photographic action" frequent references have been made, has at length traced the action to its source. In a paper read before the Royal Society he has shown that peroxide of hydrogen is capable of producing all the phenomena observed, and that there is good reason to believe that this agent is present, though in almost infinitessimal quantities, in all the cases covered by his experiments. The experiments described in his paper entitled "On Hydrogen Peroxide as the Active Agent in producing Pictures on a Photographic Plate in the Dark", show that hydrogen peroxide is capable, even in the most minute quantities, of producing action exactly similar to that produced by light. For instance, if a piece of Ford blotting paper, which is itself quite inactive, is wetted with a solution of one part of peroxide in 500,000 of water and hung up to dry in a warm room for three quarters of an hour, and is then placed in contact with a photographic plate in the dark for two hours, the plate, on development, shows a distinct picture of the blotting paper.

THE question of where the peroxide comes from in the cases treated of by Dr. Russell in his former papers seems to present little difficulty. Sensitive plates - though they may be called "dry"—always contain a certain amount of moisture, in fact they would probably become inactive if rendered absolutely dry. The air, too, which is in contact with the plates contains a greater or smaller quantity of moisture. Now the metals which were most active in producing the pseudo-photographic action are those most likely to decompose water with the formation of peroxide. As a matter of fact, when tested by a sufficiently sensitive reagent it is found that this is the case, and the order of the metals as regards power to produce this reaction is the same as their order in producing the pseudo-photographic action. Again, as regards the essential oils which have been shown to be very active, these contain terpenes, and it is a characteristic of this class of bodies that when oxidising they give rise to hydrogen peroxide.

Dr. Russell has worked out the question most thoroughly, and his conclusion seems to be amply justified by his experimental results. It will be a great satisfaction to all photographers that one of their most insidious foes has at length been exposed in open court, for now that they know what it is that has to be avoided it is a comparatively easy matter to devise means for avoiding it.

HERR GERSTENBRANDT, of Gratz, recommends the following very simple method of securing parallelism between the photographic plate and an object which is being copied. Set up the camera in front of the plan or map to be copied, and adjust it with a spirit level. Fix a compass to a square block of wood, bring one of the edges in contact with the object to be copied, and note the exact position of the compass. Then apply the same edge of the block to the focussing screen, and turn the camera on the screw, so that the needle of the compass assumes the same position as before.

THE Journal of the Photographic Society of India for May contains a very fine photograph of lightning taken by Mr. C. E. C. French at Simla. The picture contains a number of minor flashes and two very fine ribbon flashes—one apparently from cloud to earth, the other from cloud to cloud. The latter curves round nearly through a right angle, the one extremity being nearly horizontal while the other is nearly vertical. The photograph, apparently, was not taken on a backed plate so that it suffers somewhat in sharpness of detail in the larger flashes. Of course it is possible that some of the apparent halation is due to the illumination of clouds near the flash, but this would hardly account for all the features. Be this as it may, the photograph is a very interesting one and suggests many curious questions regarding the behaviour of lightning.

THE CAMERA CLUB.

(FROM A MEMBER).

"THE Committee have under consideration a scheme for removing the Club to much larger premises, and are engaged in making inquiries

as to the prospect of attracting a sufficient number of new members to support the undertaking." So runs the first note in the March number of the *Journal* of the Camera Club, which is now housed at 28 Charing Cross Road. A remarkable fact in connection with this Club is that few of the many amateur photographers in this Presidency are members of it and the only apparent explanation of this fact is that the advantages of membership are not sufficiently known. There is little doubt that most of those who cultivate the photographic art in this country pursue it when they go home on leave or pension, and find many difficulties in riding their hobby. There is also little doubt that, even in the pleasures and distractions of life in London, those who stay there, from choice or necesssity, sometimes find time heavy on their hands. For these inconveniences the Camera Club offers a remedy and it also gives its members the opportunity of adding to their knowledge and being "up to date" through social intercourse with kindred spirits and by demonstrations and lectures, not on photography alone, but on various scientific and practical subjects as well.

In the basement of the building occupied by the Club there are several dark rooms, well ventilated, and furnished with all the appliances necessary for development. There is also a daylight work-room, a room fitted with an arc-light, and a lathe-room. Chemicals in ordinary use can be purchased from the attendant, who undertakes the washing of plates and prints. Upstairs, besides the dining-room and the billiard room, there is a large reading-room, which is also used for exhibitions and lectures, and on the roof there is a studio, provided with a camera and lens, and a dark room.

At least twice every week there are entertainments, gave or gray and the following programme for March last is a fair sample:—

Thursday, March 2nd, 8-15 P.M.—Mr. G. A. T. Middleton, A. R. I. B. A. "Architecture of the Renaissance Period."

Monday, March 6th, 8-30 P. M.—Exhibition of Photographic Novelties.

Thursday, March 9th, 8-15 P.M.—Mr. Leonard Addenbrooke, M. I. C. E. "Possibilities of Electric Power Supply in England."

Monday, March 13th, 8-15 P.M.—Smoking concert by members of the Savage Club.

Thursday, March 16th, 8-15 P.M.—Mr. J. W. Woodall, M.A., F. G. S., F. R. G. S. "The Early History of Ornamental Turning."

Monday, March 20th, 8-15 P.M.—Mr. Percy Lund. "In the Footsteps of Wordsworth."

Thursday, March 23rd, 8-15 P.M.—Professor Norman Collie, Ph.D., F. R. S. "Exploration in the Canadian Rockies: a Search for Mount Hooker and Mount Brown."

Monday, March 27th, 8-15 P.M.—Mr. J. H. Knight, "Experiments in Stereoscopic Projection with the Single Lantern". Demonstration of working "Gravura" paper.

"*Omne tulit punctum qui miscuit utile dulci*" was the verdict given in favour of the most popular of the Roman, poets and surely the Camera Club too deserves it.

FINDING THE FOCAL LENGTH OF A LENS.

A SIMPLE method of determining the focal length of a compound lens is frequently very useful, so we give the following taken from a letter by Mr. T. R. Dallmeyer, in the *British Journal of Photography*.

"1. *Reverse the lens in its flange* on the camera, and focus accurately upon a distant object (parallel rays). Measure the distance from some definite point in the mounting of the lens, the hood, for instance, to the plane of the ground glass. (This gives the distance between the hood and the front "focal plane" of the compound lens). Say it is nine inches.

2. *Screw the lens in the flange in its ordinary position* and again focus accurately upon a distant object (parallel rays). Mark its position upon the baseboard of the camera. (The focussing screen now lies in the plane of the back focal point.)

3. Now proceed to focus accurately upon a near object placed at a distance of three or four times the (roughly estimated) focal length of the lens from the hood of the lens, say fifty-nine inches. The focussing screen will have to be racked out from its position for parallel (as in 2) a certain distance. Measure this; say it is two inches.

We know that the distance of the object is 59 inches, *less 9 inches* (as in 1), from the front focal plane of the compound lens, and that the image is two inches from the back focal plane.

$$\text{Hence } F^2 = 50 \times 2 = 100$$

$$\text{or the focal length} = \sqrt{100} = 10 \text{ inches.}$$

This method will be found to involve less labour, and is less liable to error, than either of the methods given by J. F. T. (I believe the credit of the second method he gives is due to Grubb).

The knowledge of the true focal length of a lens *alone* is of little practical value to the photographer, but the knowledge of its focal length in conjunction with the distance of the front focal point or plane from some definite point of the lens itself will be extremely useful for accurate proportions in reduction or enlargement.

Example.—A reduction of four times is required with the lens in question. It is only necessary to place the object four times the focal length of the lens away from the front focal point or plane of the lens, or $4 \times 10 + 9 = 49$ inches from the hood. when a *certain* reduction of four times is at once arrived at upon accurate focussing.

Note.—The position of the focal points of a positive-lens system never alter. Once found, they are always known.

OUR HOME LETTER.

April 14th 1899.

Silver stains on negatives have always been among the bugbears of the amateur photographer. Leave a negative in contact with sensitized paper in the printing frame for a day or two, and the evil is done, especially if the frame has been lying in a damp place. Brown marks with a metallic lustre on the surface make their appearance, and leave an impression of their presence upon any subsequent prints. How to get rid of these stains is a question of regular occurrence at the Club, or in the enquiry column of the photographic journals, but hitherto the question has been considered as difficult as the proverbial three which King John inflicted upon the Abbot of Canterbury. The problem, however, has been solved by a writer in a weekly contemporary, who adopts simply the following procedure. If the stains are old, and have a metallic lustre on the surface, he first rubs them very gently with emery powder; if recent, and not deeply seated, this part of the treatment may be omitted. The next step is to place the negative in a strong solution of hyposulphite of soda. In five or ten minutes, says the writer, the stains will disappear.

For taking silhouette pictures, says an American contemporary, an ordinary room is perhaps preferable to a studio, in that all the light may come from behind the sitter. Choose if possible a north light. In front of the window hang a thin white cloth to soften the light, this should be hung some little distance from the window frame, so that no trace of any shadow may fall upon it. It must be free from creases, fastened to rods top and bottom to give an absolutely flat light. In front of this screen place the sitter. All the light thus comes from behind the object supposing that a room with a single window has been chosen. There will be no difficulty as to how the picture will look, for the image on the ground glass will be a sharp and distinct silhouette. Slow plates should be used with development for absolute density and clear glass, and the negative, if necessary, should be afterwards intensified. The best developer is pyro-soda with a fair amount of sulphite. Children can often be effectively taken by the silhouette method, and it is quite easy to take a child full length. For this purpose a table should be placed before the window at such a height that the top cuts the light. On this the child may be posed in profile standing or sitting. With a little thought and experiment, many delightful poses may be evolved. The camera in the case of a full length should be placed with the lens at exactly the same height as the top of the table, because if higher, the feet would be lost in the black mass of the table, and the effect destroyed. Before printing, a narrow strip of paper may be pasted across the table, reducing the ground to a narrow strip.

There is a good deal of talk about a new printing process invented by Mr. Thos. Manly, who gave a demonstration thereof a fortnight ago before the Royal Photographic Society. Practically this new paper is a modification of the carbon process, and though a little more lengthy, and necessitating a certain amount of additional detail, it has notwithstanding one or two very important advantages over the older systems. To describe the process in outline. A sheet of plain paper is sensitized with maganese salt, and then printed upon from the negative. The image is partially visible, something like an undeveloped platinum print. This print is washed in water to remove the salt which has not been acted upon. It is then squeegeed to paper carrying pigmented gelatine, and treated with hydrochinone [?] and dilute acetic acid. The result is a print having a pleasant matt surface, admirably adapted for artistic work. Mr. Manly has patented his process, and will shortly be in a position to supply the necessary materials.

Instead of the usual sprinkling showers of April, this year we have had almost a tropical rainy season. From the last week in March, to the third in April there has been a continuation of stormy weather, and exceptionally heavy rainfall, coupled with a low temperature. Such inclement weather has naturally acted as a wet blanket upon new recruits to the ranks of photography, whose cameras and apparatus spick-and-span from the dealer lie idle, while the impatience of their owners vents itself in horrible expletives directed at the clerk of the weather. The Easter holidays proved a great disappointment especially in the case of business men, whose leave of absence is restricted to three or four days. A rainy season must have a very marked influence upon the consumption of plates, and I have no doubt the run on plate makers has been less than usual on such occasions.

A pamphlet on "Carbon Printing in the Tropics," written by Colonel Waterhouse, and published by the Autotype Co., should be of interest to those in India who are working the carbon process. The writer deals with practical methods of overcoming difficulties due to climatic conditions, gives many hints on the preservation of the tissues, and precise procedure when sensitizing the same. The price of this pamphlet is sixpence.

PERCY LUND.
("MATTHEW SURFACE.")

PROCEEDINGS OF THE SOCIETY.

Monthly Meeting, held at the Society's Rooms, The Museum, Pantheon Road, Egmore.

Friday, 5th May, 1899.

MR. E. W. STONEY, PRESIDENT:—*in the chair.*

This, the first meeting of the Society in its new quarters, was well attended when the small number of members at present in Madras is considered.

NEW MEMBER.

Mr. F. H. Hannett, I.C.S., proposed by Mr. C. Michie Smith, seconded by the President, was unanimously elected a member of the Society.

PICTURES FOR THE MONTH.

Pictures of "An Interior" were exhibited by Mr. E. Meening and The Elaya Rajah of Travancore.

ELECTION OF HONORARY SECRETARY AND TREASURER.

This was postponed until next meeting.

MISCELLANEOUS.

Mr. R. Ll. Jones exhibited a series of photographs of "Ripples."

NEXT MEETING.

The next meeting will be held on Friday, the 2nd of June in the Old Theatre, Museum, at 6 p.m.

Picture Subject:—"A Tree."

JUDGE'S CRITICISMS.

Mrs. S.—Nos. 1 and 2 are considerably over exposed and the prints are consequently flat and misty, No. 3 is a little better, but would have been improved by a little more developement.

R. V.—*A Corner of a Drawing Room.* This is well exposed and full of detail, the negative would probably print better on P. O. P. (gelatine).

E. M.—Part of Tirumala Naick's Palace, Madura, very good picture of a difficult subject.

EXTRACTS.

Mr. H. P. Robinson's "Symposium."

IN the *Magazine of Art* for April, Mr. H. P. Robinson has an article entitled, "Is Photography among the Fine Arts?" which is stamped throughout by its fine moderation of language, and whilst in the conclusion he answers the question of the title himself, in the earlier part of the article he puts his argument very clearly, and it is the utterance of the writer's life-long conviction. We have only space to quote a brief passage, but commend the whole article to our readers.

Mr. Robinson says:—

"Colours or pencils do not make painters, nor do cameras and lenses create photographers; it is the skilful use of them in certain directions that possibly may be called fine art. It has been too much the custom for writers to assume that art by means of photography is impossible under any circumstances, their reason being that the camera, a soulless implement, cannot think, forgetting that the same argument would apply to brush and canvas. A photographer who has the ability, although he may not be able with his materials, to produce great works of genius, may still be able to convey his pictorial thoughts. There has never been any pretension that photography as daily seen is art even of the poorest kind.

"There is a great deal done with paint and cameras that could never by any possibility be called art. The term 'pictorial photography' is claimed for the work of a minute fragment only of the number of photographers, and a vast number of painters and students claim to be called artists who have no right to the title whatever. It is wonderful what we have come by habit to call art. The pictures, as an example, sent in to the Royal Academy every year, rejected and all, we have been taught to accept as art, and their producers artists, yet it must be obvious to any thoughtful person that there is a great deal that is not art, even among the accepted, at that exhibition.

"Beyond the 'man's skill in laying on the paint,' in a true work of fine art, there must be an indefinite something that is not easy to explain—an indefinite charm which may be felt more than seen, and which vanishes or is made ineffective under the hands of the analyst or critic. It has been defined as 'That!'—an expression that requires a snap of the fingers to carry it effectively. It is a charm not looked for in nine out of ten photographs, but is expected, and indeed thought to appear, in paintings and drawings, but is not found in many; it is the poetry, the thought, the feeling, the sentiment, the something that sends a thrill of pleasure through you—the art. It is fully expressed after all in the well-known lines:—

"'Oh, the little more, and how much it is!
And the little less, and what worlds away.'

"The true photographic artist has to see for himself, and feel, and be able to convey to others the truth that besides mountains, rivers, and trees, castles, cathedrals, and churches, there are in addition to be represented light, air, and space, that the dry bones may be made to live: that we have morning and night and their twilights, as well as noon, with the sun 'slightly behind the left shoulder;' that brilliant, clear-cut definition is not compulsory. Some photographers have shown that it is possible to generalise the phenomena of nature, although others, it is true, may have gone too far in their enthusiasm, and almost eliminated nature altogether, which, however, only serves to show that nature was pliable in their hands, if not so plastic as in the hands of a painter. But I agree with Mr. Baldry that it is a mistake to try to deceive the observer with imitations of other means of art, such as etchings and water-colour drawings, which, however, should not be taken seriously. We admit our limitations. It is well-known that the photographer can not only select scenes and improve subjects, but he may also alter effects, hold an artistic domination over his materials, and render nature, or as much as he wants of it, in his own way, becoming in its highest form a method which depends on the labours of the mind and imagination; which is a definition of 'fine art' according to the dictionaries.

"It is a curious paradox that the claim for photography as an art is not so much made by those who practise it as an art, as by those who are always arguing against it as an art, and, I am bound to add, those who practise on the sea-beach and the racecourse. Those who do most towards showing by their works that photography is an art are content to have it called 'pictorial photography.'"—*The Amateur Photographer.*

Photographic Visiting Cards.

By Louis Desard.

The method of making visiting, menu, or programme cards described in the following article (which we translate from the *Revue Suisse de Photographie*) will doubtless be read with interest by those of our readers who are anxious to find novel uses for their cameras:—

I wish to describe as clearly and concisely as I can the method I have followed in preparing a visiting card ornamented by photography. My description may perhaps be thought to err in the direction of too much detail, but attention to every little point is necessary to success. Every photographer knows that the least negligence may lead to a spoiled negative, and I may therefore be excused for taking the various points in order, and indicating the course which I have found successful.

Dimensions of the design. The size of the prints which are to be used being known, we must first decide on the size of paper which is to serve as the ground of the composition. At the same time the size of the letters of the name, and the relative positions of the name and address must be decided on. Naturally, the size of the lettering is adjusted to that of the photographs which are to be mounted on the card.

The background. A smooth white paper at once suggests itself as the most suitable background. Rough paper, as is well known, copies in a photograph of a light grey tint, in consequence of the shadow thrown by each point of the grain of the paper. However, a paper which I have found suitable is *canson* drawing paper, which is strong, and on which the name and address are easily written.*

A sheet of this paper, slightly larger than required for the composition, is stretched on a drawing board, and glued along its edges, after the manner adopted by draughtsmen to secure a perfectly smooth surface. A rectangle, measuring about 16 by 27 in., is then marked on the paper to indicate the space at disposal for the arrangement of the prints and lettering. The name and address are next put in with Indian ink. A suitable height for the capital letters is about $2\frac{1}{2}$ in.

Prints. The photographs which I used to decorate my cards were about $2\frac{1}{2}$ by $3\frac{1}{2}$ in., the most interesting portions of prints $3\frac{1}{2}$ in. square having been cut out for that purpose. They were printed on P. O. P., and by using a mask a narrow white border was given to each picture in order to more completely isolate it from its surroundings. They were toned, fixed, and glazed as usual, and mounted on bluish-grey card.

Fixing prints to the background. To the centre of the space which each print is to occupy I fix a small piece of wood about half an inch square and about five-sixteenths of an inch in thickness. On these little blocks the prints are fastened with glue, and, owing to the shadows which they cast (by virtue of their raised position), they stand out in great relief when photographed.

Affixing the flowers. This method of fixing the prints possesses the additional advantage of allowing the stems of flowers and leaves to be interposed between the background and the prints, which, let it be noted should be attached with strong glue, and allowed to become firmly stuck, for the stems and stalks are apt to exert a degree of pressure which may detach the prints.†

The grouping of the flowers around the prints calls for more skill and taste than any other part of the process, and all that can be said is that they should harmonise and set off the prints as far as possible. Do not err on the side of too much floral decoration. One or two sprays placed here and there to break the severity of a series of prints is what is wanted; a lavish profussion of flowers only overwhelms the photographic part of the decoration. As the whole arrangement is to be placed in a vertical position to be photographed, a few fine nails driven into the board and hidden by the foliage will be found useful in keeping the flowers and branches firmly in position during the necessarily lengthened exposure. The last touch is to fix a knot of ribbon at one corner as though it bound together and kept in place the stems of the flowers. The board is then ready to be photographed.

Making the negative. Carefully place the board vertical, arranging a side lighting in order to get shadow contrast, and to prevent any of the glazed prints acting as reflectors and fogging the plate. With a Lumière orthochromatic plate (series A), a Zeiss lens, well stopped down, and a yellow screen, an exposure of fifteen minutes may be given in a fairly lighted room.

The method presents no serious difficulties, and affords scope for the design of menûs, programmes, etc., of character suitable to the uses to which they are to be put.

* "Canson" paper can be obtained of artists' dealers, such as Reeves and Son.—*Translator.*

† Seccotine, sold in collapsible tubes, is a most convenient and effective adhesive for this sort of work.—*Translator.*

—*The Amateur Photographer.*

Toning Bromides and Lantern Slides After Development.

Brown.—Bleach the fixed and well-washed print in the following bath:

Mercuric chloride	8 gm. or	120 gr.
Hydrochloric acid	8 c.c. or	2 drams.
Water	200 c.c. or	6 oz.

After a few minutes' immersion, the print will be perfectly bleached, and must then be well washed to free it from mercury.

A "photographic" brown-black may be conferred on the bleached print by a short treatment in any combined toning and fixing bath diluted with eight times its bulk of water. Even in this dilute form the action is fairly rapid, although quite under control. After toning, the print simply requires washing.

Sepia.—True sepia tones are given by bleaching in the mercuric bath, followed by washing and immersion in a week solution (1 in 1,000) of hypo, until the proper colour is reached. It is finished by washing in plain water, and the tones are undoubtedly permanent and satisfactory.

Schlippe's Salt.—Although the application of Schlippe's salt after mercury is said to give red tones, this has not been my experience with Velox prints. As a matter of fact, I have found this treatment yield decidedly brown tones, with a general tint pervading the high lights. This general colouration, although it might be considered objectionable by some, gives a mellow appearance to the print, as though it had been printed on toned paper; for some classes of work this tint is very applicable, so I give the method of working: Bleach the print in the foregoing mercuric bath, wash well, and then flow it with a very weak solution of Schlippe's salt (say 1 per cent.) until the deepest shadows are a rich brown. Then wash well as usual. A still deeper brown (*i.e.*, less yellow) can

be given by immersing the treated print in a 10 per cent. solution of copper sulphate for a minute or two. Washing completes the operation.

The bleached prints may also be followed by the following gold bath:

Ammonium sulphocyanide...	... 1 gm. or	15 gr.
Water	... 60 c.c. or	2 oz.
Gold chloride...	... 130 gm. or	2 gr.

The bath must be mixed in the above order, and the gold (preferably in solution of known strength) must be added very gradually.

The tone will vary according to time of immersion, but the final tones are decidedly pleasant and effective. Prolonged immersion changes the deposit to a rich purplish blue.—*The Amateur Photographer.*

Toning and Modifying Prints After Development.

At the Photographic Club, on one of those occasions known as a " Beginners' Night," Mr. W. Ethelbert Henry lectured upon the above subject.

He supposed that all beginners at some time or other had trouble with their prints, and it was the usual thing that defective prints, such as he passed round, were consigned to the waste receptacle. It was with a wish to avoid this waste that he proposed to demonstrate a few practical expedients for improving in one way or another the unsatisfactory results which even an established man is liable to produce, and although these expedients did not claim to be new, the fact that they were not largely employed was sufficient in his opinion to warrant his bringing them again into notice.

It very often occurs that in attempting to secure a decent red tone by direct development one succeeds in making a print of a nasty browny colour. There are formulæ published which claim to give the desired tone but in the case of the print to be operated upon, this end was sought by increasing the exposure, and by certain modifications of the development. Much might be done by way of improving this brown print by toning with gold and sulphocyanide and a black or purplish black colour substituted for the undesirable tint. The following bath is recommended.

Ammonium sulphocyanide	20 gr.
Gold chloride	1 ,,
Water	2 oz.

Before applying this to the print the latter should be damped. The action is rapid, three or four seconds sufficing to carry the tone verging on blue. The print should be washed for some fifteen or twenty minutes.

In the case of a print of a cold tone by direct development, to which we wish to impart a warm brown colour, the following course may be followed: The print is bleached in mercuric chloride one hundred and twenty grains to eight ounces of water, to which is added two drams of hydrochloric acid. This solution is applied to the damp print, and the action, which is very quick, may be stopped by immersing in water and washing thoroughly. The bleached print is then blackenend in a one per cent. solution of hypo-sulphite of soda, which gives a rich brown black, tending to sepia, according to time of immersion.

Mr. Henry then showed another type of print of common occurrence, one showing a very heavy appearance due to over-exposure and over-development. Supposing that we belong not to the class who look upon such things as excellent pictorial results, we doubtless wish to reduce the density, and not only on the high lights, but as a whole. Such a print would well be negotiated by subjecting it first to a one per cent. solution of persulphate of ammonium. The effect of this treatment is to attack the heavy deposit of silver, and when this is judged to have proceeded sufficiently far, the print is rinsed and immersed in a second bath compounded as follows: A saturated solution of iodine in alcohol, and a saturated solution of potassium cyanide in water are required. A few drops of the first are taken, and to this a few drops of the cyanide are added, in excess, until the discoloration is dispersed. Diluting the mixture, we complete the reduction of the print. The double process constitutes to a great extent a selective reducing action. An over-exposed and over-developed photograph of the moon was next treated. Contrast was wanting, and in this case the print was reduced generally by the iodine and cyanide formula, very weak, and to make up for the deficiency of deposit in the shadows, toned in gold and sulphocyanide, the resulting colour being very appropriate, and the print of a much richer appearance.

The following formula was given as a means of imparting to prints a blue tone:

Ammonio-citrate of iron (ten per cent.)	5 parts
Potassium ferricyanide (ten per cent.)	5 ,,
Nitric acid (ten per cent.)	10 ,,
Water	100 ,,

After a few moments a pleasing black tone results, but continued immersion gives to the print a decidedly blue tone. This may be intensified by treatment with a solution of cyanide of potassium (1 in 5,000), which also clears the whites, and brightens up the whole image. Simple washing of the print, however, will effect this purpose. The method is praticularly applicable to transparencies and lantern slides, and a specimen of the kind was shown.

Pleasing red tones were to be obtained by the use of a formula composed of the following salts in ten per cent. solutions:

Water	20 parts
Copper sulphate	1 part
Ammonium carbonate ... ...(about)	8 parts

A thick precipitate is formed on mixing the ingredients, which redissolves on adding sufficient of the carbonate, leaving a clear solution:

In another vessel are mixed:

Potassium ferricyanide (ten per cent)	25 parts
Water	150 ,,

The copper solution is then added to the contents of the second vessel, and a turbid solution results, which will render a fine red colour in a short space of time.

It frequently occurs that vignetted bromide prints are far from satisfactory, the vignetting being abrupt and harsh. An improved appearance may be given by treatment in the following manner: After damping the print and removing the surface liquid, a strong solution of the iodine and cyanide bath described above is applied with a piece of cotton wool, the print being supported on a sheet of glass, and the parts which are not required gently gone over with the solution. Having cleared away superfluous deposit at the edges, the vignetting is softened down by holding the print under a tap, and while the water plays upon the centre dabbing the parts with the strong solution. To remove any possible fog on the print the strong solution remaining may be diluted, and the whole of the print immersed for a few seconds. In the

event of a flat dense print being under treatment, the general density will be reduced, and pluck may be given by toning with gold as described. A print which at first was very far from satisfactory was handled in the above manner, and the improved appearance was very marked.

The above are a few practical dodges which may often serve good purpose, but, as Mr. Henry said, they in no way exhaust the list. For the most part waste Velox prints were those used to demonstrate upon, with a few ordinary bromide prints thrown in.—*The Amateur Photographer.*

Developing the First Exposures.

For Beginners.

In the previous chapters the writer described how the plates were exposed in the camera, leaving off at the point at which they were taken back to the dark room for "development." This process is what will now be dealt with. It is conducted entirely by the light of the dark-room lamp. A room which can be made temporarily dark and put aside for photographic operations only will be found a very great convenience, but is by no means absolutely necessary. It is not as easy a matter as it would seem at first sight to darken a room in the daytime; cracks here and there *will* let in the light, but at night the problem is a very easy one, and few places are more suitable than the scullery. A sink and a plentiful supply of water help to make developing a pleasure.

Into this room then are taken the dishes, the glass measures, and bottles of developer and hypo solution, the dark slides containing the exposed plates, and the red lamp.

The developer must first be mixed. The solutions used for developing are usually of such a nature as to necessitate their being kept in separate bottles until just before they are required for use, when the necessary amount of each is measured out and the two mixed together. Accordingly, take the two bottles into the dark room and measure out the following quantities for a quarter-plate: A—Sixty minims, which dilute with water to make two fluid ounces altogether, and then add to it two hundred minims of B. If it is proposed to develop a half-plate twice the quantity of each must of course be taken. It will be noticed that there is considerably more developer than is necessary to cover the plate, and as the photographer progresses he will find he can do with much less. At first, however, it is as well to use plenty of developer, as it is much easier to get the plate evenly covered, and so to avoid markings.

In another dish pour out a similar quantity of the hypo solution. Take great care not to get any of the hypo near the developer, and before handling either the developer or the plate see that the fingers are free from any trace of hypo, and are quite clean and dry.

Have a piece or two of cardboard larger than the dishes used for developing close at hand.

When these preparations have all been made the room may be darkened and the dark slide opened. Take out the plate which has had the shortest exposure first, and lay it in the dish in which it is to be developed with its sensitive film—its face—uppermost, and cover it at once with the card. The dish should be quite clean and dry. Close the dark slide again, and put it where it will not get splashed with water or chemicals.

Before developing it is as well, as this is the first plate to be handled, just to look at it in the red light of the lamp. This must never be done in ordinary practice, but for the first one the photographer will naturally be anxious to see what it looks like. No change will be noticed in its appearance now from what it looked like before exposure. The image upon its surface, imprinted in the camera, is a perfectly invisible one, and it is the function of the developer to render this "latent image," as it is called, a visible one. After a momentary examination then, just sufficient to note this point, but not exposing the plate more than can be helped, it is put back into the dish, which is held in the left hand with the spout on the right at the corner furthest from the body. Tilt up the dish so that the furthest edge and spout are well above the opposite one—in fact, so that the furthest edge of the plate is about level with the top of the dish on the opposite side—and then with the four-ounce measure containing the developer in the right hand, bring it down (not using its lip but its round edge) and pour on the developer with an even sweep all over the plate. As the developer is poured on, gradually tip up the measure, sliding it along the edge of the dish from the right to the left-hand corner, and at the same time lower the far side of the dish till it is tilted in just the opposite way to that in which it was at first. All this takes a lot of explanation in print, but in practice it is very simple. It is designed to cover the plate quickly with one even wave of developer, starting at the right-hand corner nearest the operator, and flowing outwards and leftwards until the whole print is covered.

Do not splash on the developer as the dish lies on the table. It is apt to cause scum marks and air-bubbles, and is not the way to get good results.

As soon as the plate is seen to be evenly covered with the developer, put the card over the dish so as to keep off even the red or yellow light of the lantern, and wait. Just raise one corner of the dish every few seconds, so as to keep the solution flowing backwards and forwards over the plate, but do not lift the card for at least half a minute.

When that time has expired just glance at the plate a moment and replace the card. It is possible that the image here and there will be just showing. In warm weather and with some plates the picture appears much quicker than it does with others. In the case of plates which have had much too long an exposure, the image appears quicker than it otherwise does. If there is not enough bromide in the developer it hastens the appearance, and, on the other hand, if there is too much it retards it. The sodium carbonate has the opposite effect; the more there is of it the quicker the image appears. The warmer the solution the quicker also. The solutions should on no account be warmed, but must be used at their ordinary temperature.

All these things influence the time which development takes, and therefore it is not an easy matter to say how soon it will be reasonable to expect the picture to begin to be visible. But at this time of year, if the plate has been properly exposed and the developer compounded exactly as it has been described, the picture should be just visible in from half a minute to a minute and a half. Do not keep looking incessantly at the plate; if the image cannot be seen after half a minute's developing go on for another minute, and then look, by that time probably it will be very plainly visible. If it came out in half a minute, at the end of a minute and a half it will probably be going a darkish colour nearly all over. Pay

no attention to this, but keep the dish covered, and go on developing until it has been in the liquid about five times as long as it took for the image to appear. That is to say, if it was fairly visible in one minute continue developing for five minutes.

At the end of that time take the plate out of the dish, being careful not to injure the film, and holding it by the corners accordingly, and look at the back of it. The picture should be showing through to some extent, that is to say, here and there what was formerly the white surface of the film against the glass is now seen to be discoloured. If it is very dark development has gone too far probably.

Hold up the plate with the glass side towards the light, and look at the image. It is quite possible, if the plate is thickly coated and development complete, and if the dark-room lamp is not a very bright one, that the plate will simply appear quite opaque ; if it does not the picture should be seen buried in the film, and apparently very vigorous, that is, the blocks very black and the lights comparatively clear. Looking on the face of it the image should be visible, but very dark ; the edges of the plate where it has been protected by the dark slide should be quite clear, and free from any darkening, or only, at any rate, the very slightest. If the plate looks like this, throw away the developer, rinse the plate once or twice with water, and put it into the hypo.

So far the description of developing a plate applies to one only which has had the correct exposure. If it has been insufficiently exposed its behaviour in the developer will be different. The image will appear sluggish in becoming visible, and after five minutes' development there will still be some patches visible on the surface, which are nearly, if not quite, as light as when it was first put into the solution. This is a sure sign of under-exposure, and if the plate when looked at on the glass side shows that the image has anywhere begun to appear as a darkening of the back, while on the film side those parts of the subject which were the darkest in nature are still white on the plate, nothing can cure it, and except for the lesson it teaches the plate may be thrown away.

The writer has had very many beginners' negatives though his hands at one time or another, and the majority of them suffered from one or more of three defects, under-exposure, insufficient development, and "light fog." The last is the name given to the effects of allowing white light to fall on the plate in some part of the manipulations between the time of unpacking it and that when it is fixed, or of exposing it too much to the light from the dark-room lamp. It is a defect which can easily be prevented, but cannot be remedied. If the directions above given are carefully followed *in every particular* no trouble from "light fog" will be experienced, nor will the plates be under-developed.

As regards under-exposure it is quite possible that of the three plates exposed on the first subject that one which had the shortest exposure has been under-exposed. This is a matter which depends on the brightness of the day, the colour of the buildings photographed, and the particular plates used, so that more definite instructions cannot be given. If the first is under-exposed there is still the second, which had twice and the third, which had four times, as long, and one of these is almost bound to be correctly exposed. They may be developed in exactly the same way, one at a time, using freshly-mixed developer for each, keeping the dish covered as much as possible, and not being impatient to fix the plates before development has gone far enough.

It is very important that the beginner should familiarise himself with the appearance of the image when the plate has been correctly exposed, and with the extent to which development should be carried to give a good print. Such things can soon be acquired with a little practice, but no amount of written instructions, or verbal either for that matter, can teach them. The operations must be seen, and not only that, they must be performed by the learner himself.

If the plate has been over-exposed in the camera its appearance in the developer is exactly the opposite of that just described. The image appears very quickly, and almost at once darkens all over. It darkens through to the back to some extent all over when development is continued, and such a plate will never give a satisfactory print, any more than an under-exposed plate will, although in cases of slight over-exposure fairly good prints can be got with a little dodging.

The beginner should be careful not to jump to the conclusion at once that because the image appears in a little less time than has been stated the plate is necessarily over-exposed. It is possible that one of the several causes mentioned above are acting to render development quicker than would otherwise be the case.

When rinsed, place the plate in the hypo solution to be "fixed," or rendered unalterable by light. The yellowish substance to be seen when looking at the glass side will gradually be seen to disappear.

Note how long it takes for this to happen, and then *leave the plate in the hypo bath as long again.* This is most important. When the time is up the plate is taken from the fixing solution, placed in another dish, and rinsed in water.

Now, and not until now, may it be looked at in any light except that of the dark-room lamp. It may be taken out into the daylight and carefully examined. If it is a good negative the darkest parts of the original subject will be represented by nearly, *but not quite*, clear glass. (If they are quite clear it is under-exposed.) The sky should be of a greenish black colour, and so dark that the shape of a gas flame when looked at through the plate can just be seen. The appearance of the plate should be much more promising than it ever possessed in the developer.

The plate must now be thoroughly washed to get rid entirely of the hypo. This will take about an hour, less should never be given, and during that time the water in the dish should be repeatedly changed. A better plan where possible is to support the negative film uppermost on something a little smaller than itself immediately under the tap in the sink, and let a gentle stream of water run over it. This will thoroughly wash it in an hour.

It only remains to drain and to dry it. Stand it up in the draining rack somewhere where it can dry out of the dust. By no means must it be warmed, but drying must take place at the usual temperature of the room. Do not disturb it until it is quite dry. It is then ready for printing, which will be the subject dealt with next week.—*Photography.*

The Investigator.

SUBJECT FOR RESEARCH No. 5. *Fixing with Sulphites.*—Captain Abney, in his "Treatise on Photography" (5th edition, p. 153), makes an interesting and important announcement as to the use of a solution of sulphite of soda as a fixing agent for prints, a matter of very great importance, as with sulphite there is no possibility of certain secondary re-actions which may arise when "hypo"

is used, substances deleterious to prints being formed. Captain Abney says:—"It may be mentioned that the writer has for the last year fixed his prints with a 20 per cent. solution of sulphite of soda. In this body there is no liability for sulphur to be liberated during the fixing operation; all that can be liberated is sulphurous acid. Silver chloride and organic compounds of silver are soluble in the sulphite, but only to the extent of $\frac{1}{10}$th of that to which they are soluble in the hyposulphite. Silver sulphite is formed, which is soluble in sodium sulphite, and this is readily soluble in water. It is too early as yet to state the permanency of prints so prepared, but there is every reason to believe them to be more stable than prints fixed in the ordinary manner."

This method of fixation has not come into general use, as some persons operating with that which passes commercially as sulphite of sodium, and operating with certain printing papers, have found the fixation to be imperfect, silver chloride being left in the prints.

Our suggested research has for its object to discover how far this may be due to impurities in commercial samples of the sulphite diminishing the solubility of chloride of silver, and further hindering by lessening the permeability of colloid films to aqueous fluids. The impurity which appears most likely to affect the result in both these ways is sulphate of sodium, which impurity may be present in the sulphite by reason of a want of care in preparation, or by the subsequent oxidation of the sodium sulphite. The presence of sulphate of sodium would undoubtedly diminish the solvent power of the sulphite by mere reason of inactivity, but a main point to be ascertained is whether it (the sulphate) would have any specific adverse influence. For example, would a solution of sulphite become less solvent by the mere fact of sulphate being added? However this may be in relation to pure (separate) chloride of silver, there can scarcely be a doubt that as far as the removal of silver chloride from a gelatinous film is concerned, any sulphate would be an adverse factor, as sulphate of sodium has a curious action in depriving gelatine and other colloids of water and rendering them horny, insoluble, and for the time almost or quite impervious to moisture, and this action of sulphate of soda is so remarkable, that it is impossible not to suspect it as a factor in the different experiences of experimenters in the matter of fixing with an alkaline sulphite. An instructive experiment to show the action of sodium sulphate is to add crystals of sulphate of soda to a warm and moderately strong solution of gelatine until the liquid is saturated and a little of the salt remains over, when the gelatine will separate as a clot. The gelatine is, however, not rendered permanently insoluble, as if the clot is washed, the sulphate is removed and ordinary gelatine remains.

A series of experiments calculated to throw light on the whole question would be very easy to carry out. Small batches of silver chloride should be prepared, each by precipitating 20 grains of silver nitrate with a slight excess of common salt, agitating well in a bottle to assist the agglomeration of the precipitate, and washing several times by decantation. One of these small batches of silver chloride being in a bottle, a 1 to 4 solution of sodium sulphite is added with constant agitation until the chloride dissolves, the quantity required being read off from a burette originally full, or it may be determined by weighing the bottle and contents before and after adding the solution of sodium sulphite.

As a standard sulphite solution, we may take that prepared with the crystallised sulphite, manufactured by A. Boake & Co., and sold in 1 lb. bottles bearing their label. The first series of experiments might be made in order to determine the solvent power of this at various temperatures; then varying proportions of sulphite might be replaced with sulphate, carbonate and bi-sulphite; these three substances being the probable impurities of carelessly prepared commercial sulphite.

Whatever the result of the above series of experiments, it should not be concluded that the fixation of prints will follow in like steps. The next series of experiments should be with films of gelatine and other media containing silver chloride, these experiments being made by the light of the first series. Sulphite of soda itself, when in saturated or very strong solution, has a somewhat similar action on gelatine to the sulphate, so it may prove that even pure sodium sulphite is unsuitable for fixing when the chloride is embedded in a rather thick film of gelatine; but, on the other hand, it may be that this case can be dealt with by diluting the solution of sodium sulphite.

Should the above or other experiments show that Captain Abney's method of fixing with sulphite is only practicable in the case of prints on plain paper and that the careful selection of pure sulphite is necessary, the method may then come into use for certain classes of work when the greatest permanency is required; but if conditions can be found under which sulphite becomes an all round fixing agent, a new era of increased permanency should set in.—*The Photogram.*

The Dark-room Window with a Modification.

By Edward Dunmore.

An indispensable adjunct to the satisfactory pursuit of photography is having a thoroughly reliable method of illumination, one with the maximum quantity of light and the manimum of actinism. Owing to the imperfect filtration of the light, or I should perhaps say to the light filter used, it has become the usual plan to have a very small quantity of deep ruby light that not puts a dangerous strain on the eyesight, as well as much inconvenience in conducting the ordinary work of the dark-room, instead of a fair amount that will permit everything to be comfortably seen. If the light is safe a little increase in the quantity of it can make no difference, but we all know that no light can be termed absolutely so. On this account the less there is of any kind the better for the work; here comes another but, but we can have a much larger amount of some light than others, althouth in small quantities either might be deemed safe. A screen may be so deep in colour that to ordinary eyesight little or no light appears to pass through it, and yet will have considerable effect on the sensitive plate, when a much more brilliant illuminant may be almost destitute of actinic effect. It is under such conditions we can see what we are about, and perform the different duties of the dark-room with ease and satisfaction.

It is very usual in the construction of dark-room windows to have separate sliding frames, each glazed with a different coloured glass, so that any single one can be used at pleasure. Of late years our plates have so increased in sensitiveness that one seldom finds development being conducted by any but those of the deepest ruby tint, with the result that time development has in some measure taken the place of development by observation, in order that the eyes may be spared the undoubted

strain put upon them. Of course, exposure may be so accurately timed that a certain known length of time in the developer may produce the best results. Practically this accuracy is in the majority of cases unobtainable, and it is only when numbers of negatives under the same conditions of light and exposure are taken that the best results can be had or expected with time development; but when varied and unknown exposure have to be dealt with the close examination of the plate during the process is quite necessary to obtain the best results. By carefully noting the gradual formation of the image, many inaccurately timed plates may be made into good negatives that would be inevitably spoiled if time development had been adopted

To see what we are doing safely it is of the utmost importance that the light is good, and the tiny square of deep ruby light will certainly not conform to the requirement unless the operator is possessed of abnormally good eyesight which runs the risk of being injured by such continual strain. In the fitting up of the dark-room the glass should be

properly tested,

not only by the spectroscope but by the exposure of partially covered plates for some little time to its action, at least several times in excess of that used in ordinary cases of development. An ordinary pocket spectroscope is a most useful instrument, and in case of coloured tissues being used instead of glass, alteration of colour and fading by exposure to the light may be detected although it has escaped the notice of unassisted eyesight. As the makers now turn out plates more sensitive every year, it is quite necessary to be on our guard, as a safe light at one period may be un-safe at another.

In the old wet plate day a fold or two of yellow calico, and faded at that, answered every purpose, but now other conditions prevail, and from time to time the light requires testing to be quite sure of its suitability. Diffused light is more pleasant to most people to work by than that directly transmitted by ordinary orange and ruby glass. The addition of a cover of tissue or tracing paper will afford the desired modification without perceptibly reducing the light. It is well known that many deep coloured ruby glasses are more unface than lighter ones, and the use of such may lead to disappointment by fogging plates of which the cause is quite unsuspected, and the fault being attributed to either plates, developers, or extraneous light. If the precautions I have recommended are taken this of course will not occur. As to the position of the win ow, I preper it on a level with the

developing table

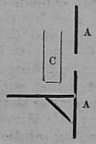
or sink, and not as I have frequently seen it high up in the wall, so that negatives had to be raised above the head to see through them, with the nuisance of the solutions running down the hands and the general awkwardness of the position. The idea that should regulate the position of the window is that as much safe light as possible should fall on the work and little as possible on the eyes of the operator. To facilitate these conditions a hinged shutter over the inside of the window that can be raised and lowered at will is an excellent plan. When developing this shutter can be lowered just below the level of the eyes without in any degree preventing the light falling on the work, which in fact seems to be somewhat augmented, on the same principle as the lens is shaded in outdoor work. I think anyone who has once adopted this plan would be loath to relinquish it, the comfort in working is so much enhanced.

The position or aspect of the window, if daylight is used, is of importance; no direct sunlight should fall on it. If a north aspect cannot be secured an outside shade should be fixed, and only reflected light be permitted to fall on the window itself. In addition to the coloured glass or tissue, an opaque blind should be available so that the whole of the dark-room shall be put into absolute darkness at will. When plates are being dried after backing or orthochromatising, and set in racks or against the wall to dry, absolute darkness is essential to keep the plates from injury. A plan suggested for the construction of the dark-room window is the use of certain solutions suitably coloured, contained in tanks through which the light passes. The following light filter of this kind will be found excellent: Procure a square white glass quart bottle, painting over with black varnish or some opaque colour the two opposite sides, the bottom and the top as far as the shoulder, so that it is opaque in all directions except one; pasting black or brown paper over it answers the same end. Fill the bottle with a 10 per cent. solution of disulphate of quinine, made rather strongly acid with dilute sulphuric acid, and to which a little tincture of turmeric has been added sufficient to make it a bight canary yellow, and filtered; then fix the bottle behind a screen in which an opening has been made somewhat less than the width and height of the bottle. The light, either daylight or artificial, is arranged to shine through the solution, all other light being cut off, and we get a very brilliant yet

non-actinic light,

comfortable to work by and safer for the plates; in fact, but little inferior to daylight.

The following diagram will explain. A, board with aperture; B, bracket for bottle and lamp; C, bottle with solution of quinine and turmeric. The bottle must be placed quite close to the opening in the board, which should be padded round to ensure close contact.



The light resisting power of the solution of quinine may be tested by half filling a flat four-ounce bottle with it, placing a strip of bromide paper behind so that the light will pass through the solution to one part of the paper and through the empty portion of the bottle to the other, exposing to a good light, say an incandescent burner, for a few minutes and then developing. Although the light passing through the solution appears more brilliant than that through the empty spaces, it will be found to have little or no effect on the paper, whereas, that through the empty space will be black as soon as the developer is brushed on it. Of course care must be taken that the passage of the light is confined to that passing through the solution by shielding the rest part of the bottle, except that immediately above, from any adventitious rays.

With this tank arrangement it is quite as easy and comfortable to work as by ordinary daylight, and a vast advance over the ruby gloom so generally adopted. In all cases where artificial is used the source of light should be outside the dark-room. Only those who have worked continuously close to a lantern in the room can appreciate the discomfort caused by the heat, which with a large lantern and burner is considerable, giving rise to headaches and giddiness, quite avoided by having the light outside.—*Magic Lantern Photographic Journal.*

COMPETITIONS.

(Open only to Members of the Society.)

HALF YEARLY ... Architecture.

RULES.

1. *Two Special Competitions shall be held, in each year, in addition to a monthly competition.*

2. *The Committee shall select the subjects for the Special Competitions, and notice of the selected subjects shall be announced in the Society's Journal in February and in July of each year. The subject for each monthly competition shall be selected two months in advance by the members present at the monthly meeting, and shall be notified in the next issue of the Society's Journal.*

3. *Pictures, &c., competing for Prizes at the Special Competitions must reach the Secretary by the last day of January and of May, and those competing at the monthly competitions must arrive in time to be shown at the monthly meeting.*

4. *Prizes will consist of Silver and of Bronze Medals, and of Certificates of Merit.*

5. *Not more than one Silver and one Bronze Medal shall be given at each Special Competition, and one Silver and one Bronze Medal may also be given at these competitions for excellence in copying, enlarging, lantern slides, or any other special branch of photography. One Silver and one Bronze Medal shall be awarded half-yearly to the exhibitors who obtain the highest and the next highest marks respectively at the monthly competitions. The number of Certificates of Merit granted at each competition is left to the discretion of the Judges.*

6. *A member may receive only one Silver and one Bronze Medal in the special, and one Silver and one Bronze Medal in the monthly, competitions, held during the same year; but should a member who has been adjudged a medal be disqualified under this rule from receiving it, he shall be given a Special Certificate instead, marked 1st or 2nd Prize.*

7. *A Special Committee of three members shall be appointed Judges by the General Committee to carry out, subject to these Rules, all arrangements connected with the competitions.*

8. *The Special Committee shall be appointed after the Annual General Meeting in January, and shall hold office for one year, and any vacancy occurring will be filled up by the General Committee.*

9. *The Special Committee shall decide upon the merits of the pictures, &c., sent in for competition, and their decision shall be final. The system of judging the monthly exhibits shall be by awarding marks, a record of which shall be kept by the Judges, the marks being totalled and the results declared half-yearly. For this purpose, only the three highest marks awarded at each competition to each competitor shall be recorded, but not the aggregate marks gained by each for a number of exhibits.*

10. *If any member of the Special Committee is a competitor, the General Committee shall appoint a non-competing member to act as Judge at that competition instead of the competing member.*

11. *No exhibit shall compete twice, but pictures, &c., already exhibited elsewhere, may be sent in for the competitions.*

12. *Lantern slides sent in for competition shall be in sets of six, and shall be judged upon the screen.*

13. *The Special Committee shall not award any Prizes or Certificates, unless they consider the exhibits to be worthy of such distinction.*

14. *Each competing exhibit shall be the entire work of the exhibitor, and when sent in shall be accompanied by a Certificate in the annexed form:—*

> *"The (1) Arranging, (2) Exposing, (3) Developing, (4) Retouching (if any), (5) Printing and (6) Trimming and Mounting were done by me without assistance."*
>
> ______________________
>
> *Member, A. P. Socy. of Madras.*

15. *All pictures for the Special Competitions shall be mounted, and may, at the competitor's option, be framed but not glazed. Those for the monthly competitions need not be mounted, but should be trimmed.*

16. *Each competing picture should have a name or title, which should indicate the nature of the subject.*

17. *No competitor shall be allowed to send in more than six pictures to compete for any particular Prize, but the same member may compete in all branches specified in Rule 5.*

18. *The pictures gaining 1st and 2nd Prizes at the half-yearly competitions, and the best pictures sent for the monthly competitions, shall, when practicable, be reproduced in the Society's Journal.*

19. *To give up-country members an opportunity of seeing the competing pictures at the special competitions, the pictures shall be circulated to all members of the Society, not residing in Madras, who apply to see them. As this arrangement can only be carried out by the cordial co-operation of the members themselves, they are expected to forward the pictures without delay to the next member, and to send one of the accompanying post-cards to the Secretary, so that by this means the progress of the pictures may be traced.*

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The Property of the Late Mr H. T. Ross.—A GEORGE HARE'S HALF-PLATE CAMERA, Brass bound, with 3 Double Dark Slides and Carriers, R. R. Lens and W. A. Lens by J. H. Dallmeyer, View Finder, Two Thornton-Pickard Time and Instantaneous Shutters, and Tripod Stand.

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